



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200
Fax 613 632-5246

Purchasing Receipts

PO No	Supplier	Line Item No	Ref No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO041721	MCM001-VU	10	1	2% 10 Net 30	88625K65	Dowel Pin Ø6mm x 40mm				6	11/19/2018	6		S130461	Stock	11/21/2018	\$ 1.49 / ft	1		\$8.94	McMaster-Carr Supply Co.
		12			MT-O1-R0.250	Tool Steel Round Bar 0.250 dia. : Material: AISI 01 TOOL STEEL ROUND BAR DIN 1.2510 or B.S. BO 1 or SAE J437 or SAE J438 or UNS T31501 or ASTM A681					11/20/2018	6		S130462	Stock	11/21/2018	\$ 1.19 / ft	1		\$7.13	McMaster-Carr Supply Co.
		16			MDELINR2.250W	MDELINR2.250 color: White : MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL receive ft				4		4		S130463	Stock	11/21/2018	\$ 23.71 / ft	1		\$94.84	McMaster-Carr Supply Co.
		17			8702K566	UHMW Bar, Black, 3" Wide, 3/4" Thick, 4 ft. long				16		16		S130464	Stock	11/21/2018	\$ 15.43 / ft	1		\$246.88	McMaster-Carr Supply Co.
										Total:		32								\$357.79	

Plex 11/22/2018 10:11 AM dart.Tollis Andrew



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041721**

Supplier: MCM001-VU
McMaster-Carr Supply Co,
P.O. Box 7690
Chicago, IL 60680-7690 USA
Phone: 330 995 5500
Fax: 330 995 9600

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO041721

PO Date: 11/14/18

Due Date: 11/19/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Via: Ground

Pymt Terms: 2% 10 Net 30

Freight Terms:

Special Comments:

E-MAILED
NOV 15 2018

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		9435K81	5/pk	302 Stainless Steel Corrosion-Resistant Compression Springs, 0.813" Long, 0.36" OD, 0.276" ID	Firmed	-	11/19/18	5 Ea	0 Ea	5 Ea	\$1.472/Ea	\$7.36
2		91251A371	5/pk	Black-Oxide Alloy Steel Socket Head Screw, 5/16"-24 Thread Size, 4" Long	Firmed	-	11/19/18	5 Ea	0 Ea	5 Ea	\$1.874/Ea	\$9.37
3		91166A290	100/pk	Washer M12 - Steel	Firmed	-	11/19/18	100 Ea	0 Ea	100 Ea	\$0.0695/Ea	\$6.95
4		91415A125	25/pk	Nut M12 X 1.5	Firmed	-	11/19/18	100 Ea	0 Ea	100 Ea	\$0.352/Ea	\$35.20
5		4053K751	4053K15	Pressure Gauge, 0-300 Psi	Firmed	-	11/19/18	12 Ea	0 Ea	12 Ea	\$30.67/Ea	\$368.04
6		2214A5	1/pk	Magnetic Base	Firmed	-	11/19/18	12 Ea	0 Ea	12 Ea	\$33.73/Ea	\$404.76
7		16823	85195A999	Giant Swiss Arm w/o Mag. Base	Firmed	-	11/22/18	3 Ea	0 Ea	3 Ea	\$435.76/Ea	\$1,307.28
8		50715K179	1/pack	Female Pipe Adapter SS 37 Degree Flared Fitting for Stainless Steel Tubing 1/pack	Firmed	-	11/19/18	4 Ea	0 Ea	4 Ea	\$25.36/Ea	\$101.44
9		51495K116	1/pk	COUPLING 1/2" NCKL PLTD BRASS	Firmed	-	11/19/18	6 Ea	0 Ea	6 Ea	\$7.78/Ea	\$46.68

Plex 11/14/18 12:58 PM dart.lavoie.chantal



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PURCHASE ORDER PO041721

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
10/ H		88625K65	3 ft long	Dowel Pin Ø6mm x 40mm	Firmed	-	11/19/18	6 ft	0 ft	6 ft	\$1.49/ft	\$8.94
		Andrew						6 ft				
11/ B		8662A61	1/pk	Dial Indicator with Certificate 0" to 1.000" Range X 0.001" Increments receive ea	Firmed	-	11/19/18	12 Ea	0 Ea	12 Ea	\$96.43/Ea	\$1,157.16
12 ✓ AT		MT-O1-R0.250	8893K204 6 ft long	Tool Steel Round Bar 0.250 dia. : Material: AISI 01 TOOL STEEL ROUND BAR DIN 1.2510 or B.S. BO 1 or SAE J437 or SAE J438 or UNS T31501 or ASTM A681	Firmed	-	11/19/18	6 ft	0 ft	6 ft	\$1.188333/ft	\$7.13
		Andrew						6 ft				
13	186327	6718K52		Fitting, Quick Disconnect D4182-1	Firmed	-	11/19/18	12 pcs	0 pcs	12 pcs	\$5.64/pcs	\$67.68
Line Item Note AS PER DWG D4182 REV. B												
14	186331	91525A120		washer D3456-1 : AS PER DWG D3456 REV.A	Firmed	-	11/19/18	100 pcs	0 pcs	100 pcs	\$0.232/pcs	\$23.20
15	186332	92311A599		Set Screw D2712 AS PER DWG D2712 REV. B	Firmed	-	11/19/18	200 pcs	0 pcs	200 pcs	\$0.22/pcs	\$44.00
16 ✓ AT		MDELINR2.250W	8572K31 4 ft	MDELINR2.250 color: White : MATERIAL: DELIN II 150E OR ACETRON GP ACETAL receive ft	Firmed	-	11/19/18	4 ft	0 ft	4 ft	\$23.71/ft	\$94.84
		Andrew						4 ft				
17 ✓ AT		8702K566	4 ft long	UHMW Bar, Black, 3" Wide, 3/4" Thick, 4 ft. long	Firmed	-	11/19/18	16 ft	0 ft	16 ft	\$15.43/ft	\$246.88
		Andrew						16 ft				
Line Item Note 4 pcs of 4 ft												
18		98017A615	500/pk	Flat Washer #6 Ss	Firmed	-	11/19/18	500 Ea	0 Ea	500 Ea	\$0.01924/Ea	\$9.62
Grand Total:											\$3,946.53	



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Canada

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PURCHASE ORDER PO041721

Order Notes

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A016 PERSONNEL QUALIFICATION

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A032 DOCUMENT SPECIAL REQUIREMENTS

A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS

A040 NOTIFICATION OF QUALITY ESCAPE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENTS

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/14/18 12:58 PM dart.lavoie.chantal

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO041721

Order Placed By
Chantal Lavoie

McMaster-Carr Number
4124925-01

Page 1 of 1

11/15/2018

Line	Product	Ordered	Shipped	
10	88625K65 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 6 mm Diameter, 3 Feet Long	2 Each	2	
12	8893K204 Tight-Tolerance Multipurpose O1 Tool Steel Rod, 0.250" Diameter, 6 Feet Long	1 Each	1	
16	8572K31 White Delrin® Acetal Resin Rod, 2-1/4" Diameter, 4' Length	4 Feet	4	
17	8702K566 UHMW Bar, Black, 3" Wide, 3/4" Thick	16 Feet	16	
<hr/>				
Expected to ship				
7	85195A999 Giant Swiss Arm Only, 19" Total Height #16823	3 Each	3	Nov 26-30
11	8662A61 Combination Dial Plunger-Style Variance Indicator with NIST Certificate & 0" to 1" Measuring Range	12 Each	10	Nov 26-Dec 10

DAS
61
9-89

McMASTER-CARR®**Tight-Tolerance Multipurpose O1 Tool Steel Rod**
6 mm Diameter, 3 Feet Long\$6.48 Each
88625K65

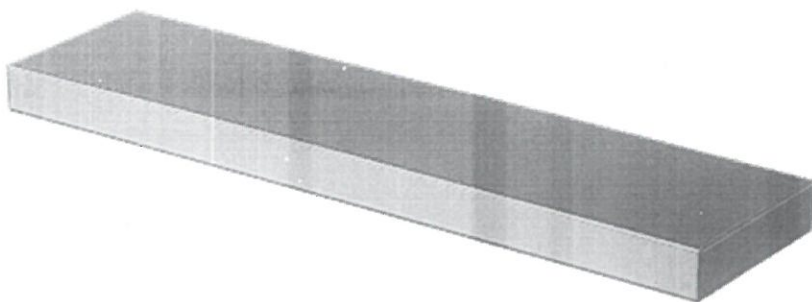
Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	6mm
Diameter Tolerance	-0.013mm to 0.013mm
Tolerance	Tight
Rating	
Yield Strength	50,000 psi
Temper	
Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C62
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%

Manganese	1.00-1.40%
Nitrogen	0.40-0.60%
Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	3 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges, O1 tool steel is an oil-hardening material that resists wear and abrasion.

McMASTER-CARR**UHMW Bar**

Black, 3" Wide, 3/4" Thick

In stock
\$15.43 per ft.
8702K566

Material	UHMW Plastic
Cross Section Shape	Rectangle
Construction	Solid
Texture	Smooth
Color	Black
Clarity	Opaque
Thickness	3/4"
Thickness Tolerance	-0.070" to +0.070"
Thickness Tolerance Rating	Standard
Width	3"
Width Tolerance	-1/16" to +1/16"
Length	1 ft., 2 ft., 3 ft., 4 ft., 5 ft.
Length Tolerance	-1/8" to +1/8"
Backing Type	Plain
Hardness	Durometer 70D
Hardness Rating	Medium
For Use Outdoors	No
Temperature Range	-20° to 180° F
Impact Strength	16.80 ft.-lbs./in.
Impact Strength Rating	Excellent
Tensile Strength	2,400 psi
Tensile Strength Rating	Poor
Specifications Met	ASTM D4020
Density	0.034 lbs./cu. in.
Coefficient of Friction	0.19
Dielectric Strength	450 V/Mil
Water Absorption	0.01%
Coefficient of Thermal Expansion	1.4×10^{-4} in./in./°F
RoHS	Compliant

Commonly used as machine guards and as liners in chutes and hoppers. These sheets, bars, and strips have a slippery surface and excellent abrasion, wear, and impact resistance.

McMASTER-CARR®**Tight-Tolerance Multipurpose O1 Tool Steel Rod**
0.250" Diameter

8893K204



Material	O1 Tool Steel
Cross Section Shape	Round
Construction	Solid
Appearance	Plain
Diameter	0.25"
Diameter Tolerance	-0.0005" to 0.0005"
Tolerance Rating	Tight
Yield Strength	50,000 psi
Temper Rating	Softened (Annealed)
Hardness	Rockwell B90
Hardness Rating	Medium
Heat Treatable	Yes
Maximum Hardness after Heat Treatment	Rockwell C65
Mechanical Finish	Precision Ground
Temperature Range	Not Rated
Specifications Met	ASTM A681
Straightness Tolerance	Not Rated
Density	0.28 lbs./cu. in.
Coefficient of Thermal Expansion	7.1×10^{-6}
Elongation	25%
Material Composition	
Iron	94.79-96.95%
Carbon	0.85-1.05%
Chromium	0.40-0.70%

Manganese	1.00-1.40%
Nitrogen	0.40-0.60%
Phosphorus	0-0.030%
Silicon	0-0.50%
Sulfur	0-0.030%
Tungsten	0.40-0.60%
Vanadium	0-0.30%
Length	3 ft., 6 ft.
Additional Specifications	Guidelines for Heat Treating Tool Steel
RoHS	Compliant

These precision-ground rods have a tight diameter tolerance. Commonly used for dies, punches, and gauges. O1 tool steel is an oil-hardening material that resists wear and abrasion.

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI O1 TOOL STEEL ROUND BAR

SPECIFICATION:

DIN 1.2510 or B.S. BO 1 or
SAE J437 or SAE J438
or UNS T31501 or ASTM A681

PART NUMBER:

MT-O1-R [D.DDD]
WHERE "D.DDD" = DIAMETER IN INCHES
EG. 5/8" ROUND BAR = MT-O1-R0.625

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	VM

DART AEROSPACE		Howarth, Ontario, Canada	
AISI O1 TOOL STEEL ROUND BAR			
DESIGN BY	DATE	XX	XX
DESIGNED BY	08/03/2017	XX	XX
CHECKED	08/03/2017	XX	XX
QA APPR.	08/03/2017	XX	XX
APPROVED	08/03/2017	XX	XX
DATE	08/03/2017	XX	XX
SCALE: NTS WEIGHT: N/A LBS			
SHEET 1 OF 1			
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EN17-149

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-01-R0.250
 DATE: 18/11/22

PO / BATCH NO.: P0041721/S130462

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 6ft
 QUANTITY INSPECTED: 6ft
 QUANTITY REJECTED: —

THICKNESS ORDERED: 0.250"
 THICKNESS RECEIVED: 0.250"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	ASTM A681
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	P0041721
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>Ar</u> DATE: <u>18/11</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

McMASTER-CARR®

White Delrin® Acetal Resin Rod

2-1/4" Diameter

In stock
\$24.13 per ft.
8572K31



Material	Delrin® Acetal Plastic
Cross Section Shape	Round
Construction	Solid
Texture	Smooth
Color	White
Clarity	Opaque
Diameter	2 1/4"
Diameter Tolerance	0" to +0.030"
Tolerance Rating	Oversized
Length	1 ft., 2 ft., 3 ft., 4 ft., 5 ft.
Hardness	Rockwell M90
Hardness Rating	Hard
For Use Outdoors	No
Temperature Range	-20° to 180° F
Impact Strength	1.00 ft.-lbs./in.
Impact Strength Rating	Good
Tensile Strength	9,000 psi
Tensile Strength Rating	Good
Specifications Met	ASTM D6100, NSF/ANSI Standard 51 for Food Contact, NSF/ANSI Standard 61 for Drinking Water
Density	0.051 lbs./cu. in.
Coefficient of	0.20

Friction	
Dielectric Strength	435 V/mil
Water Absorption	0.30%
Coefficient of Thermal Expansion	8.5×10^{-5} in./in./°F
RoHS	Compliant

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : DELRIN 150E OR ACETRON GP ACETAL

PART NUMBER : M-DELRIN-R2.DDD X COLOR CODE
DIA

WHERE D.DDD = DIAMETER IN INCHES
X = COLOR CODE, "W" = WHITE, OMITTED = BLACK
EG. 1" BLACK ROUND BAR = M-DELRIN-R1.000
2" WHITE ROUND BAR = M-DELRIN-R2.000W

RELEASED
2010 MAR 27 4P
PC-18-657

APPROVED

B	UPDATE DRAWING TO CURRENT STANDARDS. ADD MATERIALS LIST AND SPECIFICATIONS CIR-110. ADD "ACETRON GP ACETAL" AS OPTION (REV. A).	SAD	17.10.19
A	NEW ISSUE	DS	01.11.12
REV.	DESCRIPTION	BY	DATE
DESIGN	SAD		
DRAWN	SAD		
CHECKED	RF		
MFG. APPR.	RA		
APPROVED	HS		
DE APPR.	CP		
DATE	17.10.19		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M-DELRIN-R			
SHEET 1 OF 1			
SCALE NTS			
TITLE DELRIN ROUND BAR			
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THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS NOT TO BE RELEASED OR DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MDLRIN R2.250W
 DATE: 18/11/22

PO / BATCH NO.: P0041721/S130463

MATERIAL CERT REC'D: Ks
 QUANTITY RECEIVED: 4ft
 QUANTITY INSPECTED: 4ft
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.250"
 THICKNESS RECEIVED: 2.250"
 SHEET SIZE ORDERED: -
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	DELRIN
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	P0041721
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u>	SIGNED OFF BY: _____
DATE: <u>18/11/22</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in